



ROSS ENGINEERING CORPORATION

WORKSHEET H.V. RELAYS / CONTACTORS / CIRCUIT BREAKERS

Name: _____ Company: _____ Date: _____

Please fill in as much as possible so Ross Engineering Corp. can recommend the best device for the application!

Ross devices are rated with 60Hz PK test voltage, 1 minute hold without breakdown.

Application Class: Power Class _____? Electronic Class _____? Used for _____.
What is the actual continuous working high voltage? \pm _____, + _____, - _____ kV DC. _____ kV AC RMS.
_____ kV PEAK. _____ 1 PHASE. _____ 3 PHASE. _____ kV PK pulse. Pulse width _____ μ SEC.
Pulse Duty Cycle _____% _____ PPS. _____ Rise time. _____ Delay to 37% time _____ seconds.
What is the HV frequency? _____ Hz. Used in _____ air _____ oil _____ SF6. Used at _____ Ft. _____ Meters max. altitude.
Is there a test voltage (one minute hold) required? + _____ kV DC. - _____ kV DC. _____ kV RMS 50/60Hz. _____ kV PK.
Is there a basic impulse level required (BIL, 1.2 μ SEC x 50 μ SEC wave: _____ kV PK. Single pulse _____? Multiple _____?
Contact configuration required: _____ NC. _____ NO. _____ DT. _____ latching. No. of poles: _____.
How many amps must it carry? _____ Amps RMS continuous. _____ Amps PK. _____ Amps DC. _____ Amps _____ frequency.
Does it have to interrupt a short circuit? _____ Amps RMS symmetric? _____ Asymmetric? _____ Amps DC _____.
If intermittent, how long must it carry current? _____. _____ Amps RMS. How often? _____.
Does it have to close on current? _____ Amps _____ continuous _____ momentary _____ secs.
Does it have to carry current after making or breaking current & reclosing? _____ Amps. How often per hour _____?
Closed Momentary current _____ Amps Peak 10 cycle. _____ Amps Peak 1 cycle.
Capacitor Discharge (Crobar) _____ kV. _____ MFD _____ Amps PK _____
Seconds RC time constant delay down to 37%. _____ Does it have to make or break load current only _____?
Amps AC _____ DC _____. Is HV fused _____? _____ Amps continuous.
Required actuation speed: contact part. _____ millisecc, close _____ millisecc.
Delay required: _____ sec. to close. _____ sec. to open.

-----ADDITIONAL DETAILS-----

What is the actuator voltage and frequency? _____ V, _____, 50Hz, 60Hz, 400Hz, DC & special available.
Momentary pull-in current for 10-100 Millisecc during closing can be 5 to 20 times continuous holding current:
Are enough amps available from power supply to maintain at least 90% voltage during pull-in? _____ Amps, holding. _____ Amps, continuous.
How many sets of SPDT auxiliary contacts needed? _____.
Auxiliary contacts requirements: _____ V AC. _____ V DC. _____ Amps. Air valve type _____. Pressure _____ PSIG.
For relays 60kV PK and under standard electrical is SPDT 11A 250V AC, 5A 30V DC. Over 60kV relays have 15 Amps AC. Higher voltage and/or current available on contactors and circuit breakers.
Ambient temperature range during operation: _____ $^{\circ}$ C to _____ $^{\circ}$ C. Enclosed _____? Indoor _____? Outdoor _____?
Enclosure required _____? Ventilation _____?
Electrical load life: _____ No. of operations per week for _____ years. Relay. _____ Contactor. _____ Circuit Breaker. _____
Mechanical life: _____ No. of operations per week for _____ years.
Does device need under-voltage trip. (open upon minimum voltage _____ or loss of control voltage?)
Does normally open contactor need to stay closed if momentary loss of control voltage? For how long? _____ sec.
Is an energy storage solenoid driver required to close HV contacts? _____
Is an energy storage solenoid driver required to open HV contacts? _____
Is an energy storage solenoid driver required to high speed fault trip open? _____
Is an energy storage type solenoid driver required to open upon loss of control voltage or low charge voltage? _____
Can user supply 50V to 100V pulse (from fault current sensing) for fast trip open (if fast interrupt of fault current required)?
Anti-pump feature required. _____? Air insulated type _____? Vacuum interrupter required _____?
Customer to mount in oil _____?
Other requirements: _____



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